

ABSTRACT OF THE DISCLOSURE

A concatenated convolutional encoded and block encoded signal is decoded conventionally using a first Viterbi decoder (22), a de-interleaver (23) and a block decoder. Blocks correctly decoded by the block decoder are identified by the block decoder and marked in an output signal from the block decoder. The marked
5 decoded signal is interleaved (26) to form an interleaved marked decoded signal. A delayed version of the encoded signal (21') is decoded with a second Viterbi decoder (32), using the known bits from the marked decoded signal. That is, states of the encoder with which the encoded signal was encoded which are inconsistent
10 with known bits from known blocks are discounted in the second Viterbi decoding, as are any transitions passing through such a state. This may be visualised as constraining a Viterbi trellis in the vicinity of the known bits. Output from the second Viterbi decoder may be de-interleaved (33) and block decoded (34) to form a decoded output. Further iterations of the decoding with further delayed versions
15 of the encoded signal and further de-interleaving and block decoding stages may be performed until no significant further improvement in the error rate of the decoded signal is achieved.